



Bali's Huckleberry Finn Cleans Rivers

Gary Benchehib, Make A Change World
Indonesia

☀ Call to Action

Get involved with Gary and his brother Sam's work of cleaning up our rivers and oceans. Learn how at **Make A Change: makeachange.world**

☀ Values

- Curiosity
- Concern
- Commitment
- Imagination
- Environmentalism

☀ Lessons Learned

Inaction, just like action, has global consequences. We are all interconnected; if we want change to happen, we need to start acting like we do.

Some problems are more visible than others. Sometimes, in order to solve a problem, you need to be a magician, and find a way to bring the invisible to light.

Finding solutions is about seeking collaboration from all parties, not pointing fingers at each other. A positive attitude will help get people working together to bring solutions to the table.

At 14, Gary Benchehib formed Make a Change Bali to clean up plastic pollution from the beaches near his home.

Soon he realized that the beaches he cleaned up weren't staying clean. Week after week, plastic kept appearing on the shore. He also realized that it was not possible that the sheer volume of garbage he saw was just from local people littering; this was a much larger problem. A waste management problem. He learned that the problem in Bali was part of a much bigger problem that wasn't local at all – and that rivers were the source of much of the spreading of plastic pollution around the world. To solve this crisis, Gary has created multiple environmental documentaries and businesses that have helped to promote and support river cleanups around the world. His film on the Citarum River even moved Indonesian President Joko Widodo to mobilize the Indonesian Ministry of the Environment to begin working on a nationwide river cleanup project.

☀ Language Arts

Imagine you were tasked with a journey like Gary's: you have to build a plastic bottle raft which you will then use to sail the length of the Mississippi River. Write a short story in which you imagine what this journey would be like, the things you would see, and the challenges you would face (both personal challenges and the challenges presented by river pollution).

Write a research essay on Bali: Where is it? What is its main industry? How dependent is Bali on its waterways? What type of ecosystems are found in this area part of the world? How susceptible to pollution are these ecosystems? What consequences is Bali facing from pollution, and what is being done to restore its waterways?

What is the connection between rivers and the sea? Using secondary sources (videos, animation, images, tables, etc.) create a 5-7 minute video in which you explain how rivers and the sea are connected; what an estuary is; how the ecosystems in rivers and seas are dependent on each other; and how pollution, specifically plastic pollution, is affecting these ecosystems.

Organize a [Jigsaw](#)¹ exercise with your class. Assign students the following topics: microplastics (what they are, why they're dangerous, and what can we do to clean them up); chemicals most commonly found in waterways (again, students should focus on what they are, why they're dangerous, and how they can be cleaned up); best methods to clean up ocean waste on a large scale; strategies used to educate people about the hidden dangers of both micro and traditional plastics, and how to improve them; the countries that are the most vulnerable to plastic pollution in rivers and waterways.

STEM Activities

In this [lesson plan from Trop ICSU](#)², students will examine the climate change risk profile for Indonesia, including the climate impacts on major sectors of the country (agriculture, water resources, human health, ecosystems, energy, infrastructure, and disaster response). They will also analyze the current and future health risks in Indonesia due to climate change.

In this [lesson plan from teachengineering.org](#)³, students will explore ocean currents and how they contribute to plastic migration around the world.

In this lesson plan from [teachrock.org](#)⁴, students will learn about the chemical makeup of plastics. Then they will develop action plans to curtail plastic waste by learning about the environmental threats posed by plastics, and by assessing existing projects that are seeking to eliminate plastic waste.

Sustainability Innovations

Throughout Gary's youth his home, Bali, had been well-known as a tourist destination, but not as a hub for environmental education. However, today there are schools in Bali that target some of the issues that are threatening their community and their way of life. For example, [Green School Bali](#)⁵ highlights environmental issues such as renewable energy and waste management within their curriculum. Students learn about issues of sustainability, and help create actionable solutions to accomplish sustainable goals.

In order to fix pollution in Indonesia's rivers, organizations such as [Sungai Watch](#)⁶ have made it their goal to find innovative solutions to cleaning up the waterways. Not only does Sungai Watch use data and AI to improve their data collection, but they create conversations with corporations, distributors, government, and consumers. Why is it important to target each of these groups when assessing pollution?

In addition to Gary's work, filmmakers and groups around the world have highlighted the shift toward sustainability in their industries. In this [article](#)⁷, the principles of sustainable filmmaking, green transitions on set, and the Sustainable Production Forum are discussed. What is the impact of using eco-friendly strategies to build a set and film a piece about sustainability?

Sustainability Career Pathways

Documentary Filmmaker. As Gary has demonstrated, film is a very powerful tool in that can be used to draw attention to an issue and spark change. Perhaps you want to become a filmmaker. [Here are some tips for becoming a filmmaker by Ken Burns](#)⁸. And here

are some tips on how to actually [make a living doing it](#)⁹.

GIS Specialist. Geographic Information Systems (GIS) is a key technology used in mapping, modelling, and presenting spatial data. Gary employed GIS in tracking his river clean-up progress. Many environmental groups, governments, and businesses use GIS to help with their efforts to make a more sustainable world. [Learn more about being a GIS specialist here](#)¹⁰.

Materials Engineer: Along with properly disposing of and reducing the use of plastic, it will be essential to design alternative sustainable materials to replace plastic. This will take [materials engineers](#)¹¹. Explore the field of materials engineering for possible ways you could help grow a greener economy.

1 <https://www.youtube.com/watch?v=euhtXUgBEts>

2 <https://tropicsu.org/lesson-plan-climate-change-impacts-in-indonesia/>

3 <https://www.teachengineering.org/lessons/view/uok-2116-plastisphere-microplastics-pollution-wastewater-treatment>

4 <https://teachrock.org/lesson/cleaning-up-the-plastic-beach/>

5 <https://www.greenschool.org/bali/support-us/sustainability/>

6 <https://makeachange.world/sungaiwatch>

7 <https://sdg.iisd.org/commentary/guest-articles/how-the-film-and-tv-industry-is-working-towards-sustainability/>

8 <https://www.masterclass.com/articles/ken-burns-shares-tips-for-becoming-a-documentarian#ken-burnss-7-tips-for-becoming-a-documentarian>

9 <https://www.desktop-documentaries.com/how-to-make-a-full-time-living-as-a-documentary-filmmaker.html>

10 <https://www.environmentalscience.org/career/geographic-information-systems-specialist>

11 <https://engineering.purdue.edu/MSE/aboutus/whatsmaterials>

